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Food security component of sustainable development – prospects and challenges in the next decade

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Abstract

In this article we will presents a series of interesting aspects regarding food security as component of sustainable development and also possible factors that influence the national and global food security. All this elements putted together will analyze the next possible steps prospects and challenges in the next decade for global food security.

Today, there is a series of rising risk phenomena near Romania and we notice that, a series of global problems affects more and more our sustainable development and obvious our food security. Thus, it is highly important to approach food security as a phenomenon that may generate social convulsions. Sustainable development is a new type of human strategy that meets current needs, without compromising the ability of future generations to meet their own needs. This process incorporates immediate and long-term purposes, economic and environment problems, agro food potential and all these elements being in tight connection. There are many factors that can influence the sustainable development and the connection between agriculture potential and the possibility of creating food security in our region. One of the great challenge of next decade at the global and regional level is and will remain the “price volatility” of commodity is a serious problem especially for countries of the world which are dependent producers of raw materials. Agricultural commodity price volatility it is and will remain as generate factor of national food insecurity and the future solid sustainable development.

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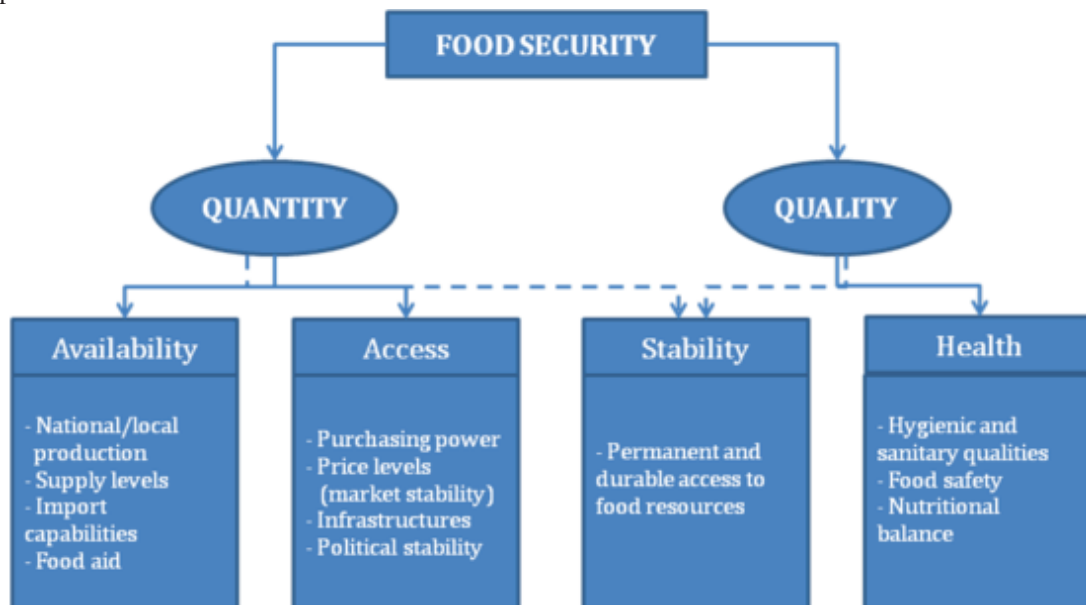
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1. Food security and sustainable development.

The food security and sustainable development of agriculture sector is subject to a wide range of economy-wide policies as well as measures specific to the sector itself. Further development of the food security aspects, connected at the sustainable development is expected as experience is gained in implementing it across a diversity of countries, especially on the Balkans regions. The relationship between economic country stability and agriculture always are made by the most important food security factors: agriculture country policies and productivity, sustainability outcomes, price volatility, public - private partnership and agriculture potential. Today, there is a series of rising risk phenomena near Romania and we notice that a series of global problems affects more and more our security. Thus, it is highly important to approach food security as a phenomenon that may generate social convulsions. Vision of food security has its roots in the definition adopted at the World Food Summit (WFS) in November 1996 on the General Session of Food and Agriculture Organization of the United Nations (UN FAO): *“Food security exists when all people at all times have physical or economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”* (FAO, 1996). A state has food security and sustainable development only when is has enough available food and agricultural products to provide nutrition for all its inhabitants, while ensuring forage for animals and water in case of natural disasters, crises, war etc. The classification of food security difficulties into two areas – quality and quantity and have serious effects on the five dimensions of food security (Fig. 1):

- Food availability
- Price volatility
- Population access to food availability
- Food utilization
- Stability of food

Fig.1



Sources : <http://www.momagri.org/>

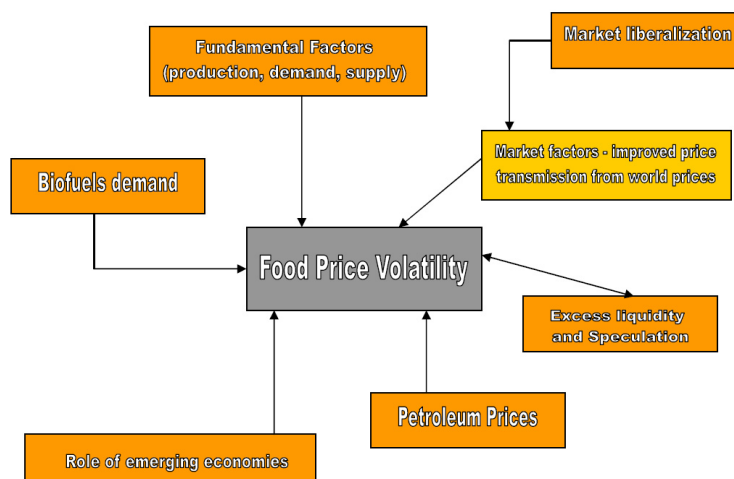
The most favored states, speaking about the food security assurance*, are the ones which have an agrarian potential, capable of providing amounts of agrarian raw materials and food for their national need. Among these countries, Romania is also counted, having a large agrarian potential, which places it on the 5th place towards the EU countries, being able to cover the food necessary for almost 80 millions of people. It is said that such countries could join a food self-dependence. The investments play an important role in any process of sustainable economic growth and development.

2. Prospects and challenges in the next decade

One of the great challenge of next decade at the global and regional is and will remain the “price volatility” of commodity is a serious problem especially for countries of the world which are dependent producers of raw materials. Agricultural commodity price volatility it is and will remain as generate factor of national food insecurity. About two billion people, almost one third of the world's population are depend on the production of primary goods such as grain, sugar, rice, meat, cotton, ferrous and nonferrous metals, copper.

The complexity of prices dynamic of the staples has become more urgent in the context of actual tendencies and especially on sustainable development. In contrast with the previous years, when the economic agents concentrated just on the outwards price, now they have to cope with a large area of complex factories, including derivate financial instruments „futures” contracts and „options”, phenomena of normal „backward”, maturity effects, as well as the link between futures contracts and outwards prices.

Fig 2.



Source: www.fao.org

Price volatility measures the rate at which prices rise or fall in a certain period of time. High volatility in world prices indicates that for farmers, and especially those in Europe, it is difficult to decide on their future production because of uncertainty about future prices. Conflict crises in various regions of the globe directly affect the food security of vulnerable populations whose access to food are reduced by high prices and cannot afford to buy in bulk when prices are low.

For Romania is not needed to made predictions on the occurrence of a food crisis because, much of the population is affected by this phenomenon. Food security more precarious of Romanian people is not the result of lack of food, yet, but the decrease in purchasing power generated by at least four factors: salary adjustment, increased VAT and taxation recalculation of pensions and inflation. These factors contribute substantially to reducing consumption, both quantitatively and qualitatively, the price volatility of food reduces consumption, while more substantial increase in imports.

Sustainable development in his the first period was based on the following key ideas:

- Systematic approach of social human activities in the national space;
- The inclusion in the calculation of all types of resources in and uncreated in business;

After some accentuated analyzes many experts agree that the sustainable development is a strategic development that concerns all goods, natural and human resources and financial resources which bring long-term prosperity. All this factor must be analyzed much focused on three concepts based on:

- Regional Growth
- Sustainability
- Globalization

Starting from these 3 concepts, OCDE experts and representatives decided and conclude in October 1014 at the level of this organization that, sustainable development of agriculture must be analyzed more focused on seven panels, such is:

1. Food and nutrition security and food safety
2. Global smart agriculture on climate changes
3. Economic sustainability of farming
4. Natural resources scarcities
5. Emissions and pollution
6. Shared Policy Strategies
7. Transboundary diseases

Innovation, structural change and access to natural resources are key drivers of productivity growth and sustainable use of resources. Policies affect these drivers through four main channels or incentive areas such as: Economic stability and trust in institutions, which are essential to attract long-term investment in the economy; Private investment, which in turn requires a transparent and predictable environment that balances the interests of investors and society; Capacity building, including provision of essential public services; Targeted incentives for innovation, structural change and sustainable resource use in the food and agricultural system;

For our future, our next decade, sustainable development must be analyzed in new strategies created and implemented by our governments especially on aspects dedicated on:

- Developing a better infrastructure;
- Investing in research,
- Innovation and new technologies,
- Sustainable methods and technologies;
- Developing a sustainable culture;
- Developing and improving risk management systems.

An efficient policy strategy could therefore consist in not only investing in the physical infrastructure, but also in ensuring that the development of web-based systems is inclusive and widely accessible. Often, such technological developments not only improve the environmental performance, but can also reduce production

costs, allow the production of higher-value food, or make the production more resilient.

Sustainable development means a better present and future quality of life. According to sustainable development vision, this process includes immediate and long-term purposes, global and local actions, economic and environment problems, all these elements being in tight connection. Such a vision cannot be carried only through policies, but society must embrace certain principles (political, economic, social, concepts). European Union provides a Sustainable Development Strategy with transparent purposes and actions based on seven priorities, most of them related to environment, from which we remind:

1. Climatic change and clean energy;
2. Sustainable transport;
3. Sustainable consumption and production;
4. Natural resources management and conservation;
5. Public health.

Volatility of commodity prices is a serious problem especially for next decade on sustainable development of our countries (South East European Region) and of the world which are dependent producers of raw materials. About two billion people, almost one third of the world's population, depend on the production of primary goods such as grain, sugar, rice, meat, cotton, ferrous and nonferrous metals, copper.

Based on the OCDE Agriculture Statistics on production and provisions, example for wheat, if the economic policies will remain as it was decided at the UN level, we will see a major development of production, in economic terms will be created the perfect ambient for an sustainable development. But, even in developed countries, however, the notion of “good policy” is a moving target. (Table 1.)

Table 1.

Wheat production and provision								
Thousand tonnes								
	2008	2009	2010	2011	2012	2013	2014	2022
OECD	294 175	275 800	274 316	276 756	274 214	278 122	280 971	288 795
Australia	21 420	21 834	27 410	29 923	22 035	23 095	24 894	24 956
Canada	28 619	26 950	23 300	25 288	27 205	28 459	28 643	29 024
Chile	1 145	1 524	1 575	1 253	1 350	1 347	1 336	1 391
Israel	76	133	100	100	112	108	105	81
Japan	881	674	571	746	855	833	884	996
Korea	10	26	39	43	32	28	28	28
Mexico	4 214	4 116	3 677	3 628	3 300	3 787	3 885	4 223
New Zealand	403	445	383	503	430	431	452	439
Turkey	17 789	20 600	19 674	21 800	20 100	20 247	20 480	21 380
United States	68 013	60 365	60 066	54 405	61 753	59 595	57 477	56 722
EU27	150 596	138 195	136 599	138 126	136 109	139 261	141 852	148 593
Non-OECD	389 986	409 793	381 623	422 010	396 960	419 239	430 795	495 698
Algeria	1 111	3 560	3 100	2 750	3 400	3 354	3 678	4 557
Argentina	8 373	9 016	15 776	12 000	13 782	11 495	13 600	15 707
Bangladesh	844	849	972	990	1 030	1 049	1 083	1 522

Brazil	6 027	5 056	6 171	5 690	4 912	5 035	5 002	5 925
China	112 456	115 115	115 180	117 401	120 580	120 665	121 258	127 106
Colombia	39	24	16	23	23	25	25	27
Egypt	7 977	8 523	7 169	8 370	8 699	8 934	9 184	10 843
Ethiopia	2 609	3 396	3 077	3 146	3 542	3 479	3 597	4 502
India	78 570	80 680	80 800	86 870	94 880	88 438	92 258	111 829
Iran	9 800	13 000	15 000	13 500	13 800	14 127	13 805	13 843
Kazakhstan	12 538	17 052	9 900	22 700	10 300	17 090	18 003	22 712
Mozambique	2	13	10	12	12	12	12	11
Nigeria	53	53	53	100	100	77	76	94
Pakistan	20 959	24 033	23 311	24 282	24 030	25 105	25 058	28 260
Paraguay	1 067	1 402	1 443	1 209	1 400	1 473	1 484	1 553
Peru	207	223	219	214	215	226	225	240
Russia	63 765	61 740	41 508	56 231	39 000	54 325	55 899	66 220
Saudi Arabia	1 986	1 152	1 260	1 100	1 000	1 145	1 158	1 305
South Africa	2 172	1 967	1 436	2 013	1 924	2 022	2 051	2 349
Sudan	642	403	291	324	254	186	203	422
Tanzania	86	92	113	95	100	83	90	165
Thailand	1	1	1	1	1	1	1	2
Ukraine	25 885	20 886	16 844	22 300	15 800	18 411	18 746	22 233
Uruguay	1 357	1 844	1 301	2 000	1 320	1 716	1 794	2 290
Zambia	185	195	172	237	254	246	247	282
BRICS	262 990	264 558	245 095	268 205	261 296	270 485	276 468	313 429
Developed countries	392 570	368 920	335 746	370 938	333 937	362 606	368 376	396 282
Least Developed Countries (LDC)	9 073	11 935	11 360	10 450	12 694	12 171	12 983	16 631
Developing countries	291 591	316 672	320 193	327 828	337 237	334 755	343 391	388 211
Sub-Saharan Africa	4 125	4 594	4 483	4 429	4 750	4 612	4 794	6 392
World	684 161	685 593	655 939	698 766	671 174	697 362	711 766	784 493
Note: 2013: Provisional. 2014 and 2022: Forecast								
Source: OECD-FAO Agricultural Outlook: Highlights 2014, OECD Agriculture Statistics								

For Europe compared with other world regions, second part of 2013 and first part of 2014, as component of sustainable development, analyzing 3 most important aspects: commodities/wheat, producer support estimates (subsidies) and consumer support estimates (subsidies), we will conclude that for this moment, EU have in 2014 the lowest productions compare to 2012.

Conclusions:

Food insecurity coupled with price volatility is a key problem for our future period 2020-20250, mainly in three large world regions, including Africa and the Middle-East, parts of Asia and in South and Central America. The general findings for the global situation on food and nutrition security are therefore mainly the composite of results for these three regions. Governments, compulsory, need to develop clearer mandates and definition of their role and of the efficient boundaries of agricultural risk management policies, but, taking to account the strategic plan for a sustainable development.

It is important to have the instruments and the information helpful in recognizing the authenticity of sustainable products and to be known which guarantees should be available to the consumer, in order not to be deceived by the advertised messages, which have no probation. The sustainable development and price volatility may be defined in many ways for a complete description. Food security is a complex and multidimensional issue. At times, when food security is threatened by global food price volatility, there is need for both international and national responses. At the national level, there is a need for comprehensive national food security for sustainable development strategies that take into account the country's specificities and characteristics, and that address both the food supply and access dimensions of food security. Such strategies should include policies that reduce food price volatility and measures that mitigate its impact especially on vulnerable populations, benefiting both consumers and producers.

At the national level, every country, including our country Romania, need information systems to monitor food markets, assess hunger and malnutrition, provide early warning and target assistance effectively. Social safety nets can reduce the impact of food price surges on the most vulnerable consumers.

Romania, as in fact any country in the world must be independent of any other factor that might influence or unbalance the normal state of food security. The best countries in terms of food security are those with agricultural potential capable of supplying large quantities of agricultural raw materials and food than their national needs.

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